

WHAT IS CLAIMED IS:

1. A fixing apparatus for fixing the toner to a sheet (8, 8') in a printer said fixing apparatus comprising: a cooling device (6) for cooling the sheet
5 (8, 8') with a coolant after fixing the toner to the sheet (8, 8'), the cooling device (6) including a flow passage (18) for blowing the coolant to the sheet (8, 8') said flow passage (18) converging to increase the velocity of the coolant.

2. The fixing apparatus of Claim 1, wherein said cooling device
10 (6) includes a swirler (12) to produce a swirled flow of the coolant.

3. The fixing apparatus of Claim 1, wherein said cooling device
(6) has ports (9) for the passage of the coolant and at least one damper (11) for controlled uncovering and covering of the ports (9).

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4. The fixing apparatus of Claim 1, wherein said flow passage
(18) is made of a flexible material, and the shape of the flow passage (18) can be changed.

20 5. The fixing apparatus of Claim 1, wherein said cooling device (6) has a device (5) for producing compressed air.

6. The fixing apparatus of Claim 1, wherein said coolant partly
contains finely atomized water, which is accumulated in the fixing device during
25 fixing.

7. The fixing apparatus of Claim 5, further including
compressed air device (5) under the sheet (8, 8') for touchless transport of the sheet
(8, 8').

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8. The fixing apparatus of Claim 7, wherein said compressed air device (5) for touchless transport of the sheet (8, 8') has ports (9') of different sizes, with different force action of the sheet (8, 8') being applied depending on the port size.

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9. A method for fixing the toner to a sheet (8, 8') in a printer, comprising the step of: swirling coolant and discharging it onto the sheet (8, 8') with increased velocity.

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10. The method of Claim 9, wherein said sheet temperature is measured, and the measurement result is used to control the coolant.

11. The method of Claim 9, wherein said coolant is controlled according to the sheet type.

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12. The method of Claim 9, wherein a sheet (8, 8') is transported in a touchless manner by compressed air and is cooled with the coolant during the touchless transport.

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13. The method of Claim 12, wherein said force action of the compressed air is controlled according to the intensity of the coolant.